**End of Unit Test** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Statistical Inquiry - FOUNDATION**

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Calculator allowed

**1.** Here are seven numbers.

13 6 12 7 6 4 8

(a) Work out the range of the seven numbers. Circle your answer.

 5 6 7 8 9

 **(1)**

(b) What is the mode of the seven numbers? Circle your answer.

 5 6 7 8 9

**(1)**

**(Total 2 marks)**

 **2.** The table shows information about water used in a household. The value for April is

missing.

|  |  |  |
| --- | --- | --- |
|   | **Month** | **Water used (m3)** |
|   | January | 16.2 |
|   | February | 18.1 |
|   | March | 15.9 |
|   | April |   |
|   | May | 17.8 |
|   | June | 21.0 |

The mean monthly water used for the six months is 18 m3. Work out the value for April.

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Answer ............................................................................. m3

**(Total 3 marks)**

**3.** Jess wants to know the number of people who live in her street. She carries out a survey. Which **two** words describe the data she collects? Circle your answers.

Primary Secondary Discrete Continuous

**(Total 2 marks)**

 **4.** A music shop manager wants to know whether people buy music from shops or websites.

(a) One of the questions he asks is

|  |  |
| --- | --- |
|   | Do you use music shops? |

Write down one criticism of the question.

 …………………………………………………………………………………………………

 …………………………………………………………………………………………………

 **(1)**

(b) Write a suitable question to find whether people buy music from shops or websites. You should include a response section.

**(2)**

(c) The manager decides to survey the first 20 customers entering his shop on a Monday morning. Give **one** reason why this sample is likely to be biased.

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 **(1)**

(d) How should the manager choose a sample?

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 **(2)**

**(Total 6 marks)**

**5.** The times that 80 customers waited at a supermarket checkout are shown.

|  |  |  |
| --- | --- | --- |
|   | **Time, *t* (minutes)** | **Frequency** |
| 0  ≤  *t*  <  2 | 32 |
| 2  ≤  *t*  <  4 | 19 |
| 4  ≤  *t*  <  6 | 20 |
| 6  ≤  *t*  <  8 | 7 |
| 8  ≤  *t*  <  10 | 2 |

(a) In which class interval is the median? Circle your answer.

 $0\leq t<2$ $2\leq t<4$ $4\leq t<6$ $6\leq t<8$

 **(1)**

(b) The manager of the supermarket says,

“90% of our customers wait less than 6 minutes.”

Does the data support this statement? You **must** show your working.

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Answer ............................................................

**(1)**

**(Total 2 marks)**

 **6.** Here is information about the scores, *t*, of class A in a test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Score** | **Frequency** |   |   |
|   | 0 < *t* ≤ 10 | 4 |   |   |
|   | 10 < *t* ≤ 20 | 8 |   |   |
|   | 20 < *t* ≤ 30 | 9 |   |   |
|   | 30 < *t* ≤ 40 | 3 |   |   |
|   | 40 < *t* ≤ 50 | 1 |   |   |

The mean score for class B in the same test is 22. Dan says,

“On average, class A did better than class B.”

Is he correct? You **must** show your working.

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Answer ......................................................................

**(Total 4 marks)**

**(Total for test = 20 marks)**